Remarks:

Reconsideration of the application is requested.

Claims 1 to 19 remain in the application. Claims 12 and 13 have been amended.

In item 1 on page 2 of the above-identified Office action, the Examiner objected to claims 12 and 13 because of two (2) informalities. The Examiner's suggested corrections have been made. It is noted that these changes are made only to correct typographical errors and are not made for any reason related to patentability. The changes are neither provided for overcoming the prior art nor do they narrow the scope of the claim for any reason related to the statutory requirements for a patent.

In item 2 on pages 2 to 3 of the above-identified Office action, claims 1 to 19 have been rejected as being fully anticipated by U.S. 5,297,093 to Coffman under 35 U.S.C. § 102.

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and, therefore, the claims have not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. In a semiconductor memory device having a memory area with storage elements, selectable access line devices respectively connected to the storage elements, and a sense-amplifier device with a potential-sensing connection and a current-supply connection, claim 1 calls for, *inter alia*, a selection device including:

> switching devices each associated with and connected to a respective one of the access line devices for accessing the storage elements in the memory area, each of the switching devices:
>
> > controllably connecting, upon selection, the respective associated access line device to the potential-sensing connection for detecting an electrical potential on the respective access line device and to the current-supply connection for supplying a compensating current to the respective access line device; and
> >
> > having first and second switching elements and, during operation, the first switching element connecting the associated access line device to the potential-sensing connection and the second switching element connecting the associated access line device to the current-supply connection.

Claim 18 is similar to claim 1, but the access line devices are bit line devices

Claim 19 calls for, *inter alia*, a semiconductor memory device, including:

a memory area having storage elements;

selectable access line devices respectively connected to the storage elements;

a sense-amplifier device having a potential-sensing connection and a current-supply connection, the sense-amplifier device connected to the access line devices; and

a selection device having switching devices each associated with and connected to a respective one of the access line devices for accessing the storage elements in the memory area, each of the switching devices:

controllably connecting, upon selection, the respective associated access line device to the potential-sensing connection for detecting an electrical potential on the respective access line device and to the current-supply connection for supplying a compensating current to the respective access line device; and

having first and second switching elements and, during operation, the first switching element connecting the associated access line device to the potential-sensing connection and the second switching element connecting the associated access line device to the current-supply connection.

According to these claims, the present invention relates to a selection device for a semiconductor memory device, where, for each selectable access line device 4, 6, for accessing memory elements 3 of a memory region 2 of the memory device 1, one assigned switching device 12 is provided. With the switching device 12, the respectively associated access line device 4, 6 can be controllably connected during the selection with a read amplifier device 20, i.e., with a potential-sensing device 22 of the sense amplifier device 20 for registering the electric

potential of the respective access line device 4, 6, and with a current-supply connection 24 of the read amplifier device 20 for feeding a compensation current Icomp, Isense into the respective access line device 4, 6.

An important feature of the selection device according to the present invention is that each switching device 12 has first and second switching transistors T1, T2, with which, in operation through the first switching transistor T1, the assigned access line device 4, 6 can be connected with the potential sensing connection 25 of the read amplifier device 20 and that, in operation through the second switching element T2, the assigned access line device 4, 6, can be connected with the current-supply connection 24 of the read amplifier device 20.

It is a core idea of the present invention that each switching device has a first and a second switching element and that, in operation through the first switching element, the associated access line device can be connected with the potential sensing connection of the read amplifier device and that, in operation through the second switching element, the associated access line device can be connected with the current feed connection of the read amplifier device.

In conventional common selection devices, a single switching element is provided for each selectable access line device. With this single switching element, the respectively assigned access line device in its entirety is connected in the *conventionally known manner* with the potential sensing connection and, at the same time, with the current feed connection of the assigned read amplifier device. In this conventional configuration, a certain read current thus flows during operation in a real application through the switching elements, which are not switched through. This read current can lead and does lead to an *uncontrollable* drop in voltage across the entire selection device, and the read amplification device cannot regulate this drop. Consequently, in conventional selection devices, due to the closed-in read amplification device, a defined voltage at the end of the respectively selected bit line device *cannot be maintained.*

Coffman relates to an improved read amplification configuration for a computer with non-volatile memory elements. Each non-volatile memory element has an array of memory cells. Each memory cell has a drain region and the drain regions of all of the cells for a column memory cell are connected to a common drain-column line. See Coffman in the Abstract. Coffman shows that bit lines 19, as access line devices, based on memory cells 10, are connected with a

sensing amplifier 23 through a switching device 24, 29. See Coffman at FIGS. 1 and 2. The switching device 24, 29 has a selection transistor 24, which serves as first switching element and which is connected with a column decoder 19 via the corresponding gate and which is controlled according to the signals of the column decoder 19. A further transistor 29 serves as second switching element and is connected to the same node as the selection transistor 24, so that through a reference voltage REF2 or through the control signal of the column decoder 18, the respective bit line 19, can be connected with a first input, which is characterized with the reference symbol IN, or with a second input, which is at a voltage Vdd, of the sensing amplifier 23. See Coffman at FIG. 2 and the text explaining FIG. 2 at col. 4, line 27, to col. 5, line 33.

The Coffman does not directly disclose the features of claims 1, 18, and 19, and the features are not indirectly suggested to the person of skill in the art.

In the rejection, the Examiner seems to indicate that Coffman and the configuration discussed therein with regard to FIGS. 2 or 3 matches potentials at the nodes 31 and 40 (see FIG. 3). In the configurations shown in FIGS. 2 and 3, this would make

it possible to achieve a more precise sensing of the currents flowing (current sensing).

However, contrary thereto, a voltage sensing is carried out to sense the corresponding voltage on the bit line. For such a purpose, the corresponding switching device 12 from FIG. 2 of the present is divided into a first switching element T1 and a second switching element T2. Only by doing so can a measurement of a voltage drop through the switch be achieved.

If the present invention were attempted to be realized in Coffman, the switching element 24 of FIGS. 2 and 3 would have to be divided into two switching components to be able to feed a current, on one hand, and to be able to measure the corresponding voltage drop through the switching element, on the other hand. This, however, is not the case.

Because there are basic structural differences between the present invention and the Coffman configurations of FIGS. 2 and 3, Coffman does not show a device as recited in claims 1, 18, and 19 of the instant application.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1, 18, or 19. Claims

1, 18, and 19 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claim 1.

In view of the foregoing, reconsideration and allowance of claims 1 to 19 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

Please charge any fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

Gregory L. Mayback
Reg. No. 40,719

For Applicant
GLM:dgm

November 22, 2004

Lerner and Greenberg, P.A.
Post Office Box 2480
Hollywood, FL 33022-2480
Tel: (954) 925-1100
Fax: (954) 925-1101